City of Lafayette Staff Report

For:	City Council
By:	John M Luttropp, Associate Engineer
Date Written:	April 15, 2008
Meeting Date:	April 28, 2008
Subject:	Mount Diablo Boulevard Pathway from the Lafayette Reservoir to Village Center—Report from Work Scope Meeting on April 14, 2008

Introduction/Background

On March 24th the City Council directed staff to convene a joint meeting of the Circulation Commission, Bicycle and Pedestrian Advisory Committee, Creeks Committee, and the Ad-Hoc CIP Review Committee to work out the details for the pathway concept. The meeting was facilitated by the Council Public Works Subcommittee, and a consensus was reached with a recommendation to the City Council of a 5 foot on-street bike lane, straight 10-foot-wide pathway alignment with porous concrete surface, and informal landscaping between the pathway and the creek to be undertaken as a separate project by the Creeks Committee.

Staff seeks the Council's approval to forward this cross-sectional design of the pathway to EBMUD for the preparation of construction plans.

Summary of Items Discussed and Resolved

1. Determine the width of the on-street bicycle lane to be used (5-feet or 6-feet)

   Due to the adjacency to the creek and the associated space constraint, any increase or decrease in the bicycle lane width will result in an equal increase or decrease in the space available for the pathway.

   Option 1: Reduce the existing 6-foot wide on-street bicycle lane to 5-feet wide to conform with the existing bicycle lane width to the east of the project. This will allow for a standard multi-purpose path width of 10 feet as well as a standard bike lane width.

   Option 2: Maintain the existing 6-foot wide bicycle lane. This will result in a reduction in the pathway width from 10 feet to 9 feet (5.5 feet in the narrow section). Although this will provide a greater than standard width bicycle lane it will result in a less than standard width for a multi-purpose pathway.

   Consensus Decision

   All parties agreed that due to the limited space available a five foot on-street bike lane would be acceptable.

2. Determine the alignment of the pathway

Due to the adjacency to the creek and the associated space constraint, any deviation from a straight alignment will necessitate a reduction in the width of the pathway and or bike lane. For example if a winding pathway is created with a 4-foot deflection in its alignment, the pathway width will need to be reduced by 4 feet to a width of 6-feet.

Option 1: Construct the pathway with a straight alignment. This option will maximize the on-street bicycle lane and pathway widths. This option was used in determining the cost estimate for the project.

Option 2: Construct the pathway with a winding configuration. This option will allow for islands of landscaping if desired and may achieve other aesthetic, visual objectives. The trade-off is that implementing this option will have a direct impact on the space available for the bicycle lane and pathway. The financial impact of this option could be minor if no landscaping is installed or significant depending on the extent of landscaping installed.

Consensus Decision

The Creeks Commission members preferred a meandering walkway. The other groups felt that considering only a minor meander can be achieved due to the space constraints and the intended transportation use of the pathway, a straight alignment would be preferred. The Creeks Commission members conceded that a straight alignment would be acceptable.

3. Determine if landscaping is to be included

The addition of a landscape buffer between the pathway and the roadway, similar to Pleasant Hill Road, will necessitate an equal reduction in the pathway width in the same way as with a winding pathway. However, the inclusion of informal plantings of native species to embellish the existing naturally occurring trees and bushes along the creek side of the pathway will not require a reduction in the pathway or bicycle lane width.

Option 1: Do not include any landscaping. This option will allow the construction of a standard multi-purpose pathway and a standard width bicycle lane. This option was used in determining the cost estimate for the project.

Option 2: Include informal plantings of native species to embellish the existing naturally occurring trees and bushes along the creek side of the pathway. It may be possible to implement this option without the long term irrigation of the plantings. This option will allow for landscaping without sacrificing pathway or bicycle lane widths. If irrigation is not required additional costs is $5,000. Initially supplemental irrigation of the plantings may be required in the summer months at an estimated cost of $10,000 per year for approximately 2 years to establish the plants. This expense will come out of the budget for the Core Area Assessment District.

Option 3: Include formal landscaping, between the roadway and pathway for example. This option may achieve substantial visual/aesthetic enhancement of the pathway. However, the space for the landscaping will need to come from a direct reduction in the bicycle lane or pathway widths. If a four-foot wide landscaped area is included for the length of the project (excluding the narrow section) the additional cost is estimated at $54,000 (including irrigation and accounting for the reduction in pathway widths to be installed) with estimated

future maintenance costs of $8,000 per year coming out of the budget for the Core Area Assessment District.

Consensus Decision

The Creeks Committee members felt that a landscaping feature should be included to promote groundwater recharge as well as enhance the appearance of the pathway and promote a more park like feel to the facility. The possible width and location of this landscaping feature was discussed as well as the possible impact on bicyclists. The final decision was to include informal plantings along the back of the pathway to embellish the existing naturally occurring vegetation. It was suggested that the Creeks Committee undertake this work as a separate project to be consistent with its vision for the creek in the area.

4. Determine the width of the pathway

   The pathway width is directly dependent on resolution of items 1-3 above, assuming that widening into the creek is not desired.

   Consensus Decision

   The preceding decisions will allow for a 10 foot wide multi-purpose pathway with a narrow section of 6 ½ feet at the creek crossing.

5. Determine the surfacing material to be used (asphalt, decomposed granite, brick pavers or porous concrete). See attached staff report for more discussion of advantages and drawbacks of each optional material.

   The use of alternative surfacing materials can be incorporated into the project to improve the permeability of the surfacing and/or achieve the desired appearance of the pathway. However, all of the alternative materials discussed to date have a higher installation and/or future maintenance cost.

   Option 1: Construct the pathway out of asphalt concrete. This option is the most cost efficient in terms of construction costs and future maintenance costs. The use of asphalt surfacing is standard for most pathway projects throughout the City outside the downtown, including the recently completed project on Pleasant Hill Road and on Moraga Road. This option was used in determining the cost estimate for the project.

   Option 2: Construct the pathway out of decomposed granite. This option allows for a more permeable surface than asphalt concrete and may achieve a more park-like appearance. The installation costs for this material are similar to that of asphalt concrete. However, the future maintenance costs are likely to be much higher than that of asphalt concrete, in the order of $3,000 per year to regrade and repair the decomposed granite surface.

   Option 3: Construct the pathway out of decorative brick pavers. This option results in a more permeable surface than an asphalt pathway and may be considered to be more esthetically pleasing in appearance. However, the installation costs of a decorative paver surface are likely to be five times as high as an asphalt surface, or an additional $240,000 for the 10-foot width.

   Option 4: Construct the pathway out of porous concrete. This option results in a very permeable surface and allows for various color options to achieve the desired appearance.

The texture of this material may be considered to be more organic in appearance by some and unsightly by others. The future maintenance costs associated with this material are similar to asphalt concrete. However, the initial installation costs are likely to be 3 times as high as an asphalt surface, or an additional $120,000 for the 10-foot width.

Consensus Decision

The Creeks Committee strongly urged the use of a permeable material, especially in light of the width of the pathway and the lack of a landscape buffer. The use of decomposed granite was discussed and did not receive support due to the maintenance and appearance issues. Decorative pavers were also discussed but did not receive support due to the high installation costs and the potential conflict with the downtown master plan. The use of porous concrete was supported if the costs could be paid by EMBUD. If not, the group may have to reconvene to debate other options, including the possibility of a pathway using asphalt pavement with some type of formal landscape area between the curb and the edge of the pathway .

Fiscal Impact

Currently EBMUD has committed to fund a project in the $200,000 range. The consensus pathway configuration has an estimated construction cost of $320,000. Once the design scope has been reviewed by EBMUD, any potential cost sharing requested by the District will be presented to the City Council for review at that time.

Recommendation

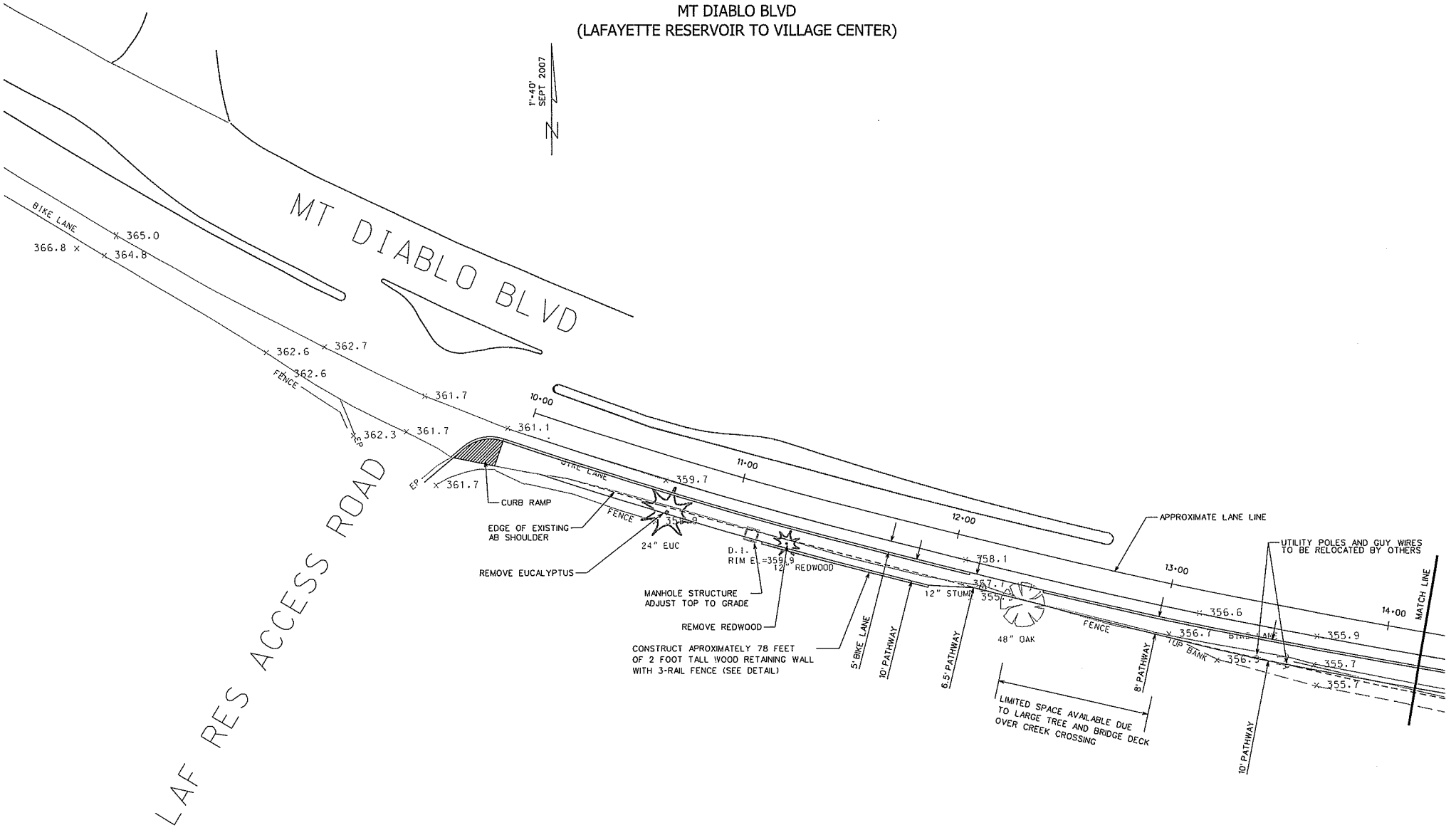
Direct staff to forward the consensus design of the pathway to EBMUD for the preparation of construction plans.

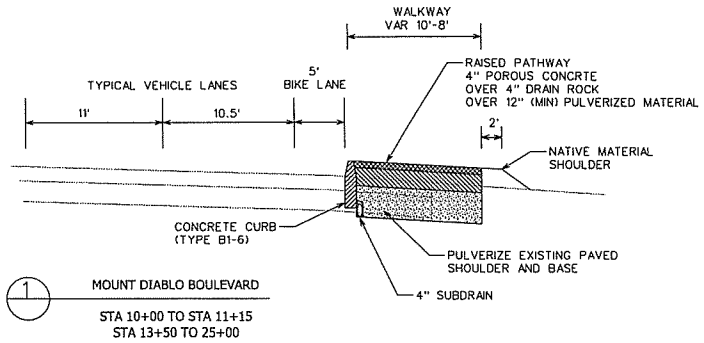
Attachments

1. Conceptual drawings

PATHWAY CONCEPT

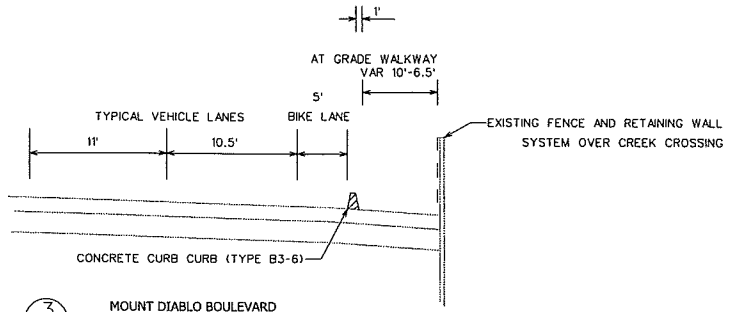
MT DIABLO BLVD
(LAFAYETTE RESERVOIR TO VILLAGE CENTER)





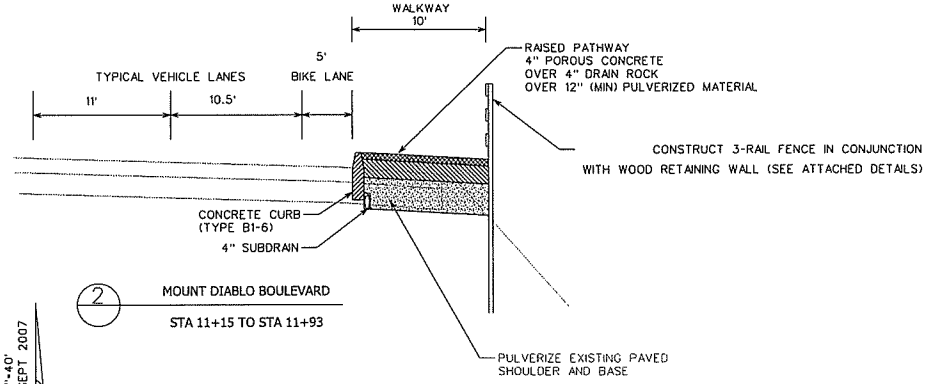
1 MOUNT DIABLO BOULEVARD

STA 10+00 TO STA 11+15
STA 13+50 TO 25+00



3 MOUNT DIABLO BOULEVARD

STA 11+93 TO STA 13+50

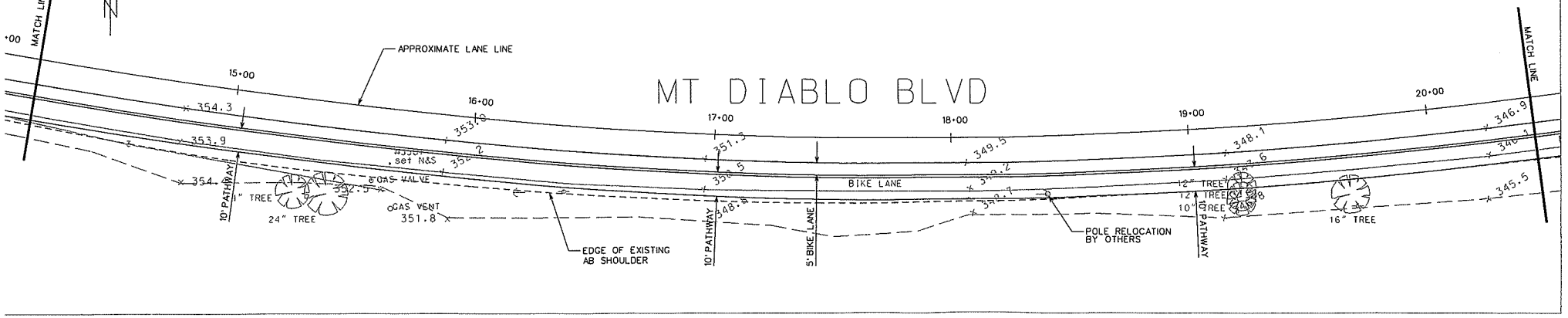


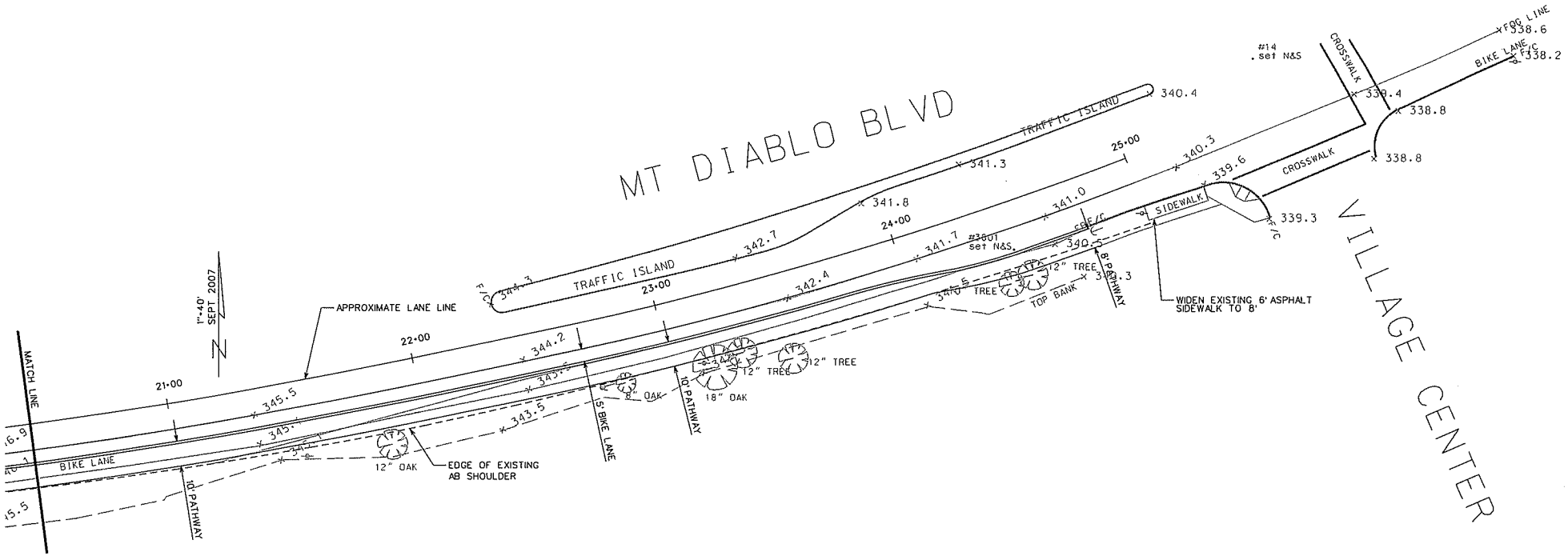
2 MOUNT DIABLO BOULEVARD

STA 11+15 TO STA 11+93

1"=40'
SEPT 2007

WIRES
OTHERS




MT DIABLO BLVD
VILLAGE CENTER
1"=40'
SEPT 2007
N
MATCH LINE
BIKE LANE
APPROXIMATE LANE LINE
21.00
22.00
23.00
24.00
25.00
TRAFFIC ISLAND
TRAFFIC ISLAND
345.5
344.2
343.5
342.7
341.8
341.3
340.4
342.4
341.7
341.0
340.3
339.6
340.5
#3801
set N&S
#14
. set N&S
CROSSWALK
CROSSWALK
SIDEWALK
BIKE LANE
FOG LINE
338.6
338.2
338.4
338.8
338.8
339.3
339.3
12" OAK
EDGE OF EXISTING
AB SHOULDER
10' PATHWAY
15' BIKE LANE
8" OAK
10' PATHWAY
18" OAK
12" TREE
12" TREE
12" TREE
TREE
TOP BANK
8' PATHWAY
WIDEN EXISTING 6' ASPHALT
SIDEWALK TO 8'